Amendments to the Claims

This listing of claims, if entered, will replace all prior versions and listings of claims in the above-identified application.

Listing of Claims

1-17.   (Cancelled)

18.   (**Currently Amended**)   A method comprising:

   identifying a plurality of nodes of a network, wherein

         said plurality of nodes are interconnected by one or more links;

   executing one or more tasks within each of [[a]] **said** plurality of nodes of [[a]]

         said network, wherein

         ~~said plurality of nodes are interconnected by one or more links,~~

         said executing comprises

               generating first data identifying at least one node of said plurality

                     of nodes at which~~, said first data comprising at least one~~

                     ~~of:~~ **at least one of**

                     ~~insert~~ **inserted** data is added, wherein

                           said ~~insert~~ **inserted** data is [[data]] associated with

                                 said each of said plurality of nodes, and

                     dropped data is ~~deleted~~ **dropped**, wherein

                           said dropped data is [[data]] associated with said

                                 each of said plurality of nodes, [[and]]

               generating second data indicating a format of in-transit data

                     transmitted over said ~~network~~ **one or more links**, and

               requesting, from at least one other node of said plurality of nodes,

                     a format of data **transmitted** over a link of said one or

                     more links attached to said at least one other node of said

                     plurality of nodes[[, and]] **;**

~~said second data is configured to indicate a format of in-transit data~~
~~being transmitted over said one or more links~~;

identifying a destination node of said in-transit data; **and**

transmitting said in-transit data to said destination node using said first data and said second data~~; and~~

~~identifying said plurality of nodes of said network~~.

19.-20. (Cancelled)

21. (**Currently Amended**)   The method of claim 18, wherein
said ~~insert~~ **inserted** data comprises[[,]] data received by said each of said plurality of nodes from said network, and

said dropped data comprises data transmitted from said each of said plurality of nodes to said network.

22. (**Currently Amended**)   The method of claim 18, wherein said executing comprises requesting at least one of[[:]]

said ~~insert~~ **inserted** data from said node of said plurality of nodes at which ~~insert~~ **said inserted** data is ~~being~~ added; and

said dropped data from said node of said plurality of nodes at which **said** dropped data is ~~being deleted~~ **dropped**.

23. (Cancelled)

24. (**Currently Amended**)   The method of claim 18, wherein said requesting comprises:

requesting at least one of a synchronous transport signal type [[**data**]] and a synchronous transport module type [[**data**]].

25.　(**Currently Amended**)　　　The method of claim 18, wherein

said network satisfies at least one of [[:]] **a first condition and a second**

condition, wherein

[[a]] **said** first condition ~~wherein, to prevent misconnection in case of~~

~~failure, traffic is:~~ **is a failure, and in a case of said first**

condition, said in-transit data is

switched ~~by dispatching said in-transit data~~ from a failed link **of**

said one or more links to a redundant link **of said one or**

more links, and

squelched ~~between said one or more links~~, and

[[a]] **said** second condition**,** wherein

said in-transit data ~~being transmitted over each of said one or~~

~~more links~~ is re-transmitted in data buckets to at least one

predetermined node ~~from said network~~ **of said plurality**

of nodes at regular intervals of time.

26.　(**Currently Amended**)　　　The method of claim 25, wherein[[,]]

said network satisfies said first condition, and

said executing one or more tasks within each of said plurality of nodes to generate

said first data comprises[[,]]

preventing misconnection by performing squelching ~~to prevent~~

~~misconnection~~.

27.　(**Currently Amended**)　　　The method of claim 25, wherein[[,]]

said network satisfies said second condition, and

said executing one or more tasks within each of said plurality of nodes to generate

said first data comprises[[,]]

for each data bucket, identifying at least one of[[:]]

said plurality of nodes [[on]] **at** which ~~insert~~ **said inserted** data is

~~being~~ added via said each data bucket; and

said plurality of nodes [[on]] **at** which ~~said~~ dropped data is ~~being~~

~~deleted~~ **dropped** via said each data bucket.

　　　　Application No.: 10/725,709

28.   (**Currently Amended**)   The method of claim 18, further comprising:

detecting a failure on a first link of said one or more links ~~on said node of said plurality of nodes communicating~~ <u>, wherein</u>

said in-transit data <u>is communicated over said first link</u>;

identifying a redundant link ~~from said node communicating said in-transit data to said destination node~~ <u>of said one or more links</u>; and

switching traffic in response to said detecting by switching said in-transit data

from said first link to said redundant link ~~of said one or more links~~.

29.   (Previously Presented)   The method of claim 28, wherein said executing

one or more tasks within each of said plurality of nodes comprises executing said one or

more tasks within each of said plurality of nodes before said failure occurs.

30.   (**Currently Amended**)   An apparatus comprising:

means for identifying a plurality of nodes of a network, wherein

said plurality of nodes are interconnected by one or more links;

means for executing one or more tasks within each of said plurality of nodes,

wherein

means for executing comprises

means for generating first data identifying at least one node of said

plurality of nodes at which[[,]] <u>at least one of</u>

~~insert~~ <u>inserted</u> data is added, wherein

said ~~insert~~ <u>inserted</u> data is [[data]] associated with

said each of said plurality of nodes, [[or]]

<u>and</u>

~~erase~~ <u>dropped</u> data is ~~deleted~~ <u>dropped</u>, wherein

said dropped data is [[data]] associated with said

each of said plurality of nodes, [[and]]

<u>means for generating</u> second data indicating a format of in-transit

data ~~being~~ transmitted over said one or more links, and

<u>means for requesting, from at least one other node of said</u>

<u>plurality of nodes, a format of data transmitted over a</u>

Application No.: 10/725,709

link of said one or more links attached to said at least one other node of said plurality of nodes, and

said ~~insert~~ **inserted** data and said dropped data comprise at least one of

data received by said each of said plurality of nodes from said network, and

data transmitted by said each of said plurality of nodes to said network;

means for identifying a destination node of said in-transit data; **and**

means for transmitting said in-transit data to said destination node using said first data and said second data~~; and~~

~~means for requesting, from at least one other node of said plurality of nodes, a format of data being transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes~~.

31.   (Cancelled)

32.   (**Currently Amended**)   The apparatus of claim 30, wherein said means for executing comprises:

means for requesting**[[,]]** said ~~insert~~ **inserted** data from said node of said plurality of nodes at which ~~insert~~ **said inserted** data is ~~being~~ added; and

means for requesting said dropped data from said node of said plurality of nodes at which **said** dropped data is ~~being deleted~~ **dropped**.

33.   (Cancelled)

34.   (**Currently Amended**)   The apparatus of claim 30, wherein said means for requesting comprises:

means for requesting at least one of a synchronous transport signal type **[[data]]** and a synchronous transport module type **[[data]]**.

35.   (**Currently Amended**)   The apparatus of claim 30, wherein said network satisfies at least one of**[[:]]** **a first condition and a second condition, wherein**

[[a]] said first condition ~~wherein, to prevent misconnection in case of failure, traffic is:~~ is a failure, and in a case of said first condition, said in-transit data is

switched ~~by dispatching said in-transit data~~ from a failed link of said one or more links to a redundant link of said one or more links, and

squelched ~~between said one or more links~~, and

[[a]] said second condition, wherein

said in-transit data ~~being transmitted over each of said one or more links~~ is re-transmitted in data buckets to at least one predetermined node ~~from said network~~ of said plurality of nodes at regular intervals of time.

36. (**Currently Amended**)   The apparatus of claim 35, wherein[[,]]

~~said network satisfies said first condition, and~~

said means for ~~executing one or more tasks within each of said plurality of nodes to generate~~ generating said first data comprises[[,]]

means for preventing misconnection comprising means for performing squelching ~~to prevent misconnection~~ , if said network satisfies said first condition.

37. (**Currently Amended**)   The apparatus of claim 35, wherein[[,]]

~~said network satisfies said second condition, and~~

said means for ~~executing one or more tasks within each of said plurality of nodes to generate~~ generating said first data comprises~~, for each data bucket,~~ means for identifying[[:]] , for each data bucket, at least one of

at least one of said plurality of nodes [[on]] at which ~~insert~~ said inserted data is ~~being~~ added via said each data bucket[[; or]] , and

at least one of said plurality of nodes [[on]] at which said dropped data is ~~being deleted~~ dropped via said each data bucket.

38. (**Currently Amended**)   The apparatus of claim 30, further comprising:

Application No.: 10/725,709

means for detecting a failure on a first link of said one or more links ~~on said node of said plurality of nodes communicating~~ **, wherein** said in-transit data **is communicated over said first link**;

means for identifying a redundant link ~~from said node communicating said in-transit data to said destination node~~ **of said one or more links**; and

means for switching traffic in response to said detecting by switching said in-transit data from said first link to said redundant link.

39. (Previously Presented) The apparatus of claim 38, wherein said means for executing one or more tasks within each of said plurality of nodes comprises means for executing said one or more tasks within each of said plurality of nodes before said failure occurs.

40. (**Currently Amended**) A network node comprising:

an interface ~~to couple said network node to a network~~, wherein

said interface is configured to couple said network node to a network,

said network comprises a plurality of nodes interconnected by one or more links**,** and

said plurality of nodes comprises said network node; **and**

a timing communications and control processor configured to[[:]]

identify said plurality of nodes, **[[and]]**

execute one or more tasks within network node, wherein

said timing communications and control processor is configured to perform said execution by virtue of being configured to

generate first data identifying at least one node of said plurality of nodes at which[[,]] **at least one of**

~~insert~~ **inserted** data is added, wherein

said ~~insert~~ **inserted** data is data associated with said each of said plurality of nodes[[; or]] **, and**

dropped data is ~~deleted~~ **dropped**, wherein

said dropped data is data associated with

said each of said plurality of nodes,

[[and]]

~~generate~~ second data indicating a format of in-transit data

~~being~~ transmitted over said one or more links, and

request, from at least one other node of said plurality of nodes, a format of data transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes, and

said ~~insert~~ inserted data and said dropped data comprise at least one of

data received by said each of said plurality of nodes from said network, and

data transmitted by said each of said plurality of nodes to said network[[;]] **,**

identify a destination node of said in-transit data[[;]] **, and**

communicate said in-transit data to said destination node using said first data and said second data~~; and~~

~~request, from at least one other node of said plurality of nodes, a format of data being transmitted over a link of said one or more links attached to said at least one other node of said plurality of nodes.~~

41.   (Cancelled)

42.   (**Currently Amended**)   The network node of claim 40, wherein said timing communications and control processor **is further** configured to ~~execute one or more tasks comprises~~:

~~a timing communications and control processor configured to:~~

request, from at least one other node of said plurality of nodes, said ~~insert~~ inserted data from said node of said plurality of nodes at which ~~insert~~ said inserted data is ~~being~~ added and said dropped data from said node of

Application No.: 10/725,709

said plurality of nodes at which ~~said~~ dropped data is ~~being deleted~~
dropped.

43.   (Cancelled)

44.   (**Currently Amended**)   A machine-readable storage medium having a
plurality of instructions executable by a machine embodied therein, wherein said plurality
of instructions when executed are configured to cause said machine to perform a method
comprising:

    identifying a plurality of nodes of a network, wherein

        said plurality of nodes are interconnected by one or more links; [[and]]

    executing one or more tasks within each of said plurality of nodes to ~~generate:~~

        generate first data identifying at least one node of said plurality of nodes

            at which[[,]] **at least one of**

            ~~insert~~ **inserted** data is added**,** wherein

                said ~~insert~~ **inserted** data is [[data]] associated with said

                    each of said plurality of nodes, [[or]] **and**

            dropped data is ~~deleted~~ **dropped,** wherein

                said dropped data is [[data]] associated with said each of

                    said plurality of nodes, [[and]]

        generate second data indicating a format of in-transit data ~~being~~

            transmitted over said one or more links[[;]] **, and**

        request, from at least one other node of said plurality of nodes, a

            format of data transmitted over a link of said one or more links

            attached to said at least one other node of said plurality of

            nodes;

    identifying a destination node of said in-transit data; **and**

    communicating said in-transit data to said destination node using said first data

        and said second data~~; and~~

    ~~requesting, from at least one other node of said plurality of nodes, data~~

        ~~indicating a format of data being transmitted over a link of said one~~

~~or more links attached to said at least one other node of said plurality of nodes~~.

45.   (**Currently Amended**)   The machine-readable storage medium of claim 44, wherein said ~~insert~~ **inserted** data and said dropped data comprises at least one of, data received by said each of said plurality of nodes from said network, and data transmitted by said each of said plurality of nodes to said network.

46.   (**Currently Amended**)   The machine-readable storage medium of claim 45, wherein said executing comprises:

requesting, from at least one other node of said plurality of nodes, said ~~insert~~ **inserted** data from said node of said plurality of nodes at which ~~insert~~ **said inserted** data is ~~being~~ added and said dropped data from said node of said plurality of nodes at which said dropped data is ~~being deleted~~ **dropped**.

47.   (Cancelled)

Application No.: 10/725,709